

Notice of Allowability

Application No.

09/915,059

Examiner

Davienne Monbleau

Applicant(s)

KYUSHO ET AL.

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed on 8/30/04.
2. ☒ The allowed claim(s) is/are 3-34, 39, 40, 43-45, 48-50, 53-57, 60-64, 67-70, 73-78, 81-84, 87-92 and 95-98.
3. ☒ The drawings filed on 24 July 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____. | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S COMMENT AND STATEMENT OF REASONS FOR ALLOWANCE

Response to Arguments

Applicant's arguments filed on 8/30/04, with respect to Claims 3-34, 39, 40, 43-45, 48-50, 53-57, 60-64, 67-70, 73-78, 81-84, 87-92, and 95-98, have been fully considered and are persuasive.

In particular, the Applicant argues on page 5 of the response that there is no motivation to combine the cited prior art of record (*Rieger '574* and *Smart '604*). Both *Rieger '574* and *Smart '604* are intended to achieve the same result, control of the energy per pulse. However, they use different methods to achieve this result: *Rieger '574* uses Q-switching and *Smart '604* uses laser pulse slicing. Since each device, separately, is able to control the energy per pulse, there is no motivation to alter either device to include the method of the other. To do so would render the first device unsatisfactory for its intended purpose and would change its principle of operation. (See MPEP 2143.01[R-2]).

Allowable Subject Matter

Claims 3-34, 39, 40, 43-45, 48-50, 53-57, 60-64, 67-70, 73-78, 81-84, 87-92, and 95-98 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding Claims 3-34, the cited prior art of record does not teach or fairly suggest a method for repairing a pattern using a laser comprising, along with the other claimed steps, slicing a single laser pulse or multi-laser pulses from a string of pulses making up laser light emitted from a Q-switched mode-locked pulse laser by using an optical modulator.

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Regarding Claims 39, 40, 43-45, 48-50, 53-57, 60-64, 67-70, 73-78, 81-84, 87-92, and 95-98, the cited prior art of record does not teach or fairly suggest a laser-based pattern repair apparatus for repairing a defect in the pattern comprising, along with the other claimed features, an optical modulator to slice a single laser pulse or multi-laser pulses from a string of pulses contained in laser light emitted from a Q-switched mode-locked pulse laser.

The advantages of these features are in the specification on pages 1-21. In particular, the Applicant states on page 5 that these features provide a laser-based pattern repair apparatus that enables fine repair processing with high accuracy in repairing an opaque defect or a like pattern on a photomask having a minimum linewidth of not more than 0.18 μm . This also results in a less heat affected zone, swelling, splashes, and damage to a glass substrate.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 571-272-1945. The examiner can normally be reached on Mon-Fri 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Danielle Marbleau
DNM


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